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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,974	12/19/2001	Alan Johnson	042933/301879	1182

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EXAMINER	
RAMAKRISHNAIAH, MELUR	
ART UNIT	**PAPER NUMBER**
2643	

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/020,974	JOHNSON, ALAN	
	Examiner	Art Unit	
	Melur Ramakrishnaiah	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12-192001*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 6, 8, 9, 10, 12-14, are rejected under 35 U.S.C 102(b) as being anticipated by Tsunekawa et al. (EP 0777295 A2, hereinafter Tsunekawa).

Regarding claim 1, Tsunekawa discloses an antenna device comprising : a first and second resonator elements (1A/1B, fig. 3) arranged to allow field coupling between the first and second resonator elements such that at a first frequency the first and second resonator elements co-operate to allow operation of the first and second resonator elements in a first mode wherein the direction of current flow in one resonator element is different from the direction of current flow in the other resonator element and at a second frequency the first and second resonator elements to co-operate to allow operation of the first and second resonator elements in a second mode wherein the direction of current flow in one resonant elements is substantially the same as the direction of the current flow in the other resonator element (col. 3, line 37 – col. 5, line 30; abstract).

Regarding claims 2, 6, 8-10, 12-14, Tsunekawa further teaches the following: first resonator element (1A, fig. 3) has a first electrical length and second resonator element 1B, fig. 3) has a second electrical length, first resonator element (for example 1A, fig. 3) is arranged in a planar configuration (fig. 3), first and second resonator elements

(1A/1B, fig. 3) are arranged in a planar configuration, first and second resonator elements (1A/1B, fig. 3) are transversely separated in the plane of the resonator elements, the first resonator element (1A, fig. 3) is separated from the second resonator element (1B, fig. 3) in a plane parallel to the second resonator element, a communication device having an antenna according to claim 1, antenna (50, fig. 15) is mounted internally to the communication device, and antenna (12/13, fig. 15) is mounted externally to the communication device (col. 9 lines 16-43).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3-4, 5, 7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunekawa in view of Sekine et al. (US PAT: 5,903,822, hereinafter Sekine).

Tsunekawa differs from claims 3-4 in that although he teaches first mode and second mode in the sense of antenna having two resonant frequencies (abstract); he does not specifically teach first mode is coupled to a monopole mode and the second mode is an inverted F type mode.

However, Sekine discloses portable radio telephones having notches therein which teaches first mode is coupled to a monopole mode and the second mode is an inverted F type mode (fig. 64, col. 6 lines 4-11).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Tsunekawa's to provide for the following: first mode is coupled to a monopole mode and the second mode is an inverted F type mode as this arrangement would facilitate to use of antennas in a communication device to meet different requirement of field strengths as taught by Sekine.

Tsunekawa differs from claims 5, 7, in that although he teaches first resonator element and second resonator element (1A/1B, fig. 3), he does not specifically teach they form a monopole antenna.

However, Sekine teaches forming antenna elements forming monopole antennas (fig. 67, col. 6 lines 16-19).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Tsunekawa's to provide for the following: resonator elements forming monopole antenna as this arrangement would facilitate to meet application needs of the portable equipment as taught by Sekine.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunekawa in view of Spall (WO 99/43043).

Tsunekawa differs from claim 11 in that he does not teach the following: dielectric substrate is disposed between the first and second resonator elements.

However, Spall discloses dual band diversity antenna which teaches the following: dielectric substrate (22, fig. 2A) is disposed between the first and second resonator elements (page 7, line 21 – page 10, line 25).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Tsunekawa's to provide for the following: dielectric substrate is disposed between the first and second resonator elements as this arrangement would provide one of the well-known methods, among many possible methods, of separating conducting elements as shown by Spall.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melur Ramakrishnaiah whose telephone number is (571)272-8098. The examiner can normally be reached on 9 Hr schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curt Kuntz can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Melur Ramakrishnaiah
Primary Examiner
Art Unit 2643